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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,007	12/21/2001	Rudi Grutzmann	LE A 33 846	5920
7590	04/14/2004		EXAMINER	
Jeffrey M Greenman Bayer Corporation 400 Morgan Lane West Haven, CT 06516			HUI, SAN MING R	
			ART UNIT	PAPER NUMBER
			1617	

DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/019,007

**Applicant(s)**

GRUTZMANN ET AL.

**Examiner**

San-ming Hui

**Art Unit**

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-28-2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

This application is a 371 of PCT /EP00/05410, filed June 13, 2000.

Claims 1-12 are pending.

Applicant's amendments filed January 28, 2004 have been entered.

The outstanding rejection under 35 USC 112, first paragraph is withdrawn in view of the applicant's remarks.

The outstanding rejections of claims 9, 10, and 12 under 35 USC 112, second paragraph is withdrawn in view of the applicant's amendments filed January 28, 2004.

### ***Claim Rejections - 35 USC § 112***

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expression "R<sup>1</sup> and R<sup>2</sup>, including ..." recited in claim 1 renders the claims indefinite as to what moieties or substituents are encompassed by the claims.

The expression "R<sup>3</sup> and R<sup>4</sup>, including ..." recited in claim 1 renders the claims indefinite as to what moieties or substituents are encompassed by the claims.

The term "its part" recited in claim 1, in page 2 of the amendments filed December 21, 2001, is not clear as to which part it is referred to.

The expression "cardiovascular diseases are associated with metabolic diseases or deficits" in claim 2 renders the claims indefinite because it is not clear what

Art Unit: 1617

association between the cardiovascular disease and the metabolic diseases or deficits.

Therefore, it is not clear what cardiovascular diseases are encompassed by the claims.

The expression "optionally associated with" in claim 4 renders the claims indefinite because it is not clear how a secondary disorder being "optionally associated with" a disorder.

### ***Response to Arguments***

Applicant's rebuttal arguments filed January 28, 2004 averring ring structure as being definite have been considered, but are not found persuasive. Claim 1 recites an open-end language: "including". It is not clear what other substituents are encompassed by the claims other than the ring structure recited in the claims. Because of the open-end language, the metes and bounds of the claims can be ascertained by one of ordinary skill in the art.

Applicant's rebuttal arguments filed January 28, 2004 averring the association between cardiovascular diseases and metabolic disorder as clear have been fully considered but they are not persuasive. The issue at hand is that one of ordinary skill in the art would not be able to ascertain the metes and bounds of the scope of the claims. What cardiovascular disorders are considered as associated with the metabolic disorder? It is known in the art that atherosclerosis and dyslipidemia are associated with metabolic diseases. But how about other cardiovascular diseases such as arrhythmia, hypertension, or even hypotension? How close the association between the cardiovascular diseases and the metabolic diseases would be encompassed by the claims?

Art Unit: 1617

Applicant's rebuttal arguments filed January 28, 2004 with regard to "optionally association" have been considered, but are not found persuasive. The reason of such arguments not being persuasive would be the same as discussed in the previous paragraph. The metes and bounds of the claims would not be ascertained since it is not clear what disorders encompassed thereby.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller et al. (US Patent 5,684,014 from the IDS received August 12, 2002) and PDR (PDR, 51<sup>st</sup> ed., 1997, page 770-774).

Muller et al. teaches the compounds of formula (AI) are useful as treating arteriosclerosis (See claim 11). Muller et al. teaches the compounds of formula (AI) are useful to be formulated into a pharmaceutical composition with pharmaceutical acceptable diluent (See claim 10). Muller et al. teaches the specific species of compound (AI) (See col. 93-94, example 106; also col. 115-116, example 175).

PDR teaches pravastatin, a HMG-CoA reductase inhibitor, is useful in treating hypercholesterolemia and arteriosclerosis (See page 771-772, Indications Section).

Art Unit: 1617

The references do not expressly teach the method of treating cardiovascular diseases employing compounds of formula (A1) herein, especially the specific compounds recited in claims 6-8, 10, and 11, in combination of HMG-CoA reductase inhibitors. The references do not expressly teach a composition comprising compounds of formula (A1) herein in combination of HMG-CoA reductase inhibitors and the method of preparation thereof.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employing compounds of formula (A1) herein, especially the specific compounds recited in claims 6-8, 10, and 11, in combination of pravastatin in the method of treating cardiovascular diseases. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate pravastatin into a composition of Muller.

One of ordinary skill in the art would have been motivated to employing compounds of formula (A1) herein, especially the specific compounds recited in claims 6-8, 10, and 11, in combination of pravastatin in the method of treating cardiovascular diseases. The compounds of formula (A1) are known to be useful as treating cardiovascular diseases, such as arteriosclerosis. Pravastatin is also known to be useful as treating arteriosclerosis. It flows logically to combine the two agents together in a method useful for the treatment of arteriosclerosis since both agents are known to be useful to treat arteriosclerosis individually (See *In re Kerkhoven* 205 USPQ 1069).

Art Unit: 1617

One of ordinary skill in the art would have been motivated to incorporate pravastatin into a composition of Muller. Combining pravastatin and the composition of Muller, which are known to be useful to treat arteriosclerosis individually, into a single composition useful for the very same purpose is *prima facie* obvious (See *In re Kerkhoven* 205 USPQ 1069).

### ***Response to arguments***

Applicant's arguments filed January 28, 2004 averring the cited prior art's failure to suggest the combination of the herein claimed components have been considered, but are not found persuasive. The motivation provided in the cited prior art is based on the fact that both agents are known to treat arteriosclerosis individually. It flows logically to combine the two agents together in a method and composition useful for the treatment of arteriosclerosis since both agents are known to be useful to treat arteriosclerosis individually (See *In re Kerkhoven* 205 USPQ 1069).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 1617

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to San-ming Hui whose telephone number is (703) 305-1002. The examiner can normally be reached on Mon 9:00 to 1:00, Tu - Fri from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan, PhD., can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "San-ming Hui", is located at the bottom right of the page.



Application/Control Number: 10/019,007

Page 8

Art Unit: 1617

San ming Hui  
Patent Examiner  
Art Unit 1617